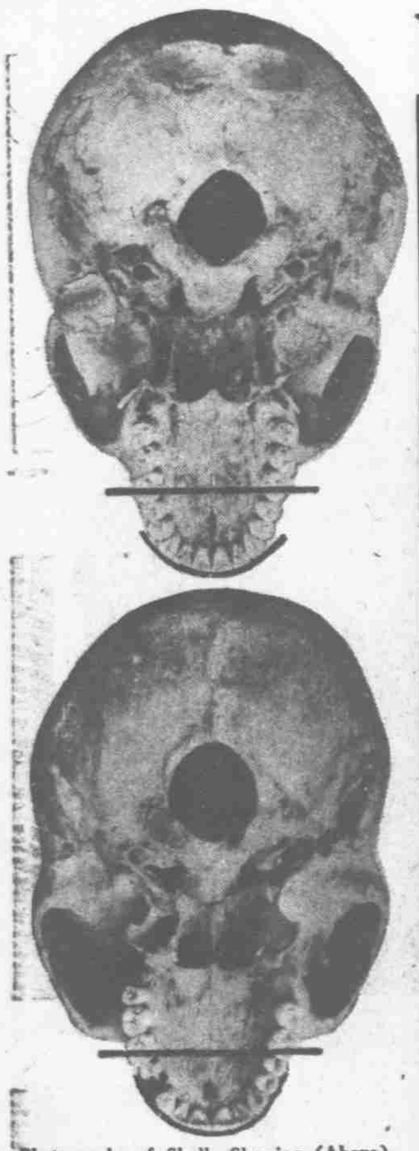
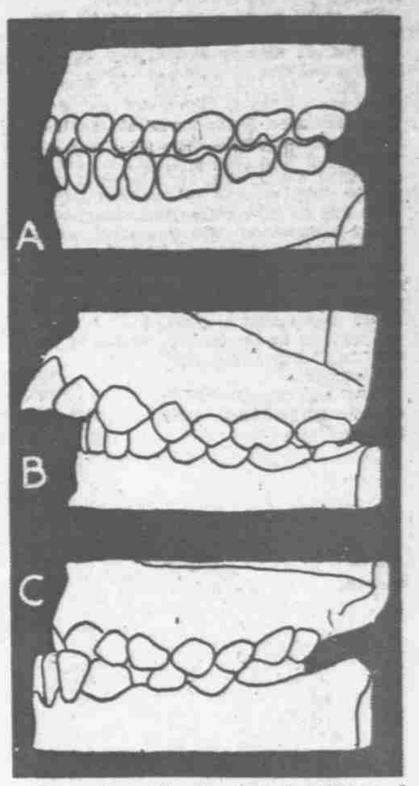
How Irregular Teeth Destroy Beauty

Why a Tooth Lost in Childhood May Give You a "Squirrel Face"—a Disfigurement Which May Only Be Corrected by Tedious and Expensive Dentistry



Photographs of Skulls Showing (Above) a Normal and Complete Set of Upper Teeth and the Resulting Normal Dental Arch; and an Upper Jaw from Which the Loss of Teeth Has Caused a Shrinking and Flattening of the Dental Arch.—From Photographs by Doctor Williams.

The Photograph on the Left Hand Side Is a Striking Example of the "Undershot" Lower Jaw, a Disfigurement Commonly Caused by the Loss of One or More Teeth in the Upper Jaw During Childhood. On the Right Hand Is a Photograph of What Is Sometimes Called the "Squirrel Jaw." Loss of Teeth on the Lower Jaw Commonly Produces This Effect. The Central Picture Illustrates a Fairly Perfect Upper and Lower Dental Arch, Where the Teeth Have Come Into Position and Retained Their Positions as Nature Intended.



Plaster Casts Showing (A) the Full Set of Teeth on Both Upper and Lower Jaw and Normal Upper and Lower Dental Arches, (B), the Position of the Teeth Which Produces the Overhanding Upper Lip or "Squirrel Face," (C), How the Loss of Teeth on the Upper Jaw Shrinks the Dental Arch and the Protruding Under Jaw Produces the "Undershot" Facial Effect.

THE loss of just one tooth in early youth or the accidental pushing of a tooth into a wrong position may lead to a life-long disfigurement of the jaws and face.

This deformity has many unhappy consequences. It destroys beauty. No woman can be really beautiful unless she has well proportioned, graceful, evenly developed jaws and teeth.

Another unfortunate result is injury to health through inability to chew properly. Irregularly developed jaws also hinder a person's success in life by preventing him from speaking clearly and from making a pleasant impression on those with whom he has to do business.

Dentists lately have given a good deal of attention to regulating teeth and the specialists are called "orthodontists." Dentistry is not an exact science and unfortunately bad judgment and bad work is just as likely in straightening teeth as is so common in the other branches of dental work.

The time when there is the best hope of correcting deformities satisfactorily is when the permanent teeth have just come in, for at that age the jawbone is very pliable and responds quite remarkably to efforts to change its form. It must be obvious, however, that in this very pliability and response to manipulation there lies a great danger through unskilled treatment.

The part of the jaw in which the teeth are planted is called "the dental arch." This arch must be symmetrical, both in the upper and the lower jaw. It must have a certain width and curve. Each side should be an exact duplicate of the opposite side.

The upper jaw must bear a fixed, graceful proportion to the lower. The upper must project slightly beyond the lower, but not very markedly. The lower must not project beyond the upper, but it must not recede in a marked degree. The upper and lower teeth must meet and fit into one another all the way round.

The commonest defects are (1) abnormally projecting upper teeth, (2) projecting lower teeth, usually due to loss of teeth in the upper jaw, (3) one-sided jaws and (4) flat face, often due to the spreading of the front part of the upper dental arch.

There are many appliances for regulating the position of the teeth and the form of the dental arch. The arch can be expanded or reduced in size or changed in any desirable way in childhood, and considerable changes can even be made in early adult life.

But how is the operator to decide what form the improved dental arch shall have? What standard of beauty, what model of perfection shall he work from? Of course, there are some changes which must obviously be made. If the upper teeth project a quarter of an inch beyond the lower they must be drawn back, of if one side of an arch is pushed in through the loss of teeth it must be rounded.

But there are questions which are not so easily decided. The length of the arch from back to front in proportion to its width varies in different persons of agreeable and well developed facial appearance. There are many different curves of each arch, different proportions of one jaw to the other that might be copied by an operator seeking to bring a defective dental arch up to the normal.

Let us suppose that the orthodontist is treating a girl. A beautiful or, at least, attractive face is of supreme importance to her. Shall he seek to remodel her defective jaws upon those of Lillian Russell, a beauty of distinctly Anglo-Saxon type, with dental arches rather long from back to front? Shall he select as a model the famous Madame Lina Cavalieri, a perfect example of the Italian type, in which the jaws as well as the face generally are somewhat broad in proportion to length from back to front?

Shall he choose a wistful, child-like type of beauty, like Arline Chase, with slight, delicate jaws? Shall he take as his ideal a heavy-jawed type of beauty like Laura Nelson Hall, a type much like the original Gibson girl and quite widely admired?

These are points upon which the best orthodontists have differed and upon which there is considerable uncertainty. In the current issue of the Dental Cosmos Dr. Percy Norman Williams, a New York dentist, advances an interesting argument in support of what he believes to be the true way of determining the natural form of dental arch, which the orthodontist should follow in correcting a defective face.

Dr. Williams argues that the true form of the dental arch can be fixed by measuring the existing teeth of the person to be treated. It is well known that there are several types of teeth belonging to the different races of humanity. In one type the teeth are short and broad, in another type they are long and narrow, and so forth. According to the Williams rule, if the teeth are broad the distance across the jaw from molar to molar should be proportionately broad, and if they are narrow the width of the arch should be correspondingly narrow.

"It is impossible for the operator to render orthodontic treatment and hope to obtain satisfactory results when such a course of treatment is based on his own individual judgment," says this expert.

"Any opinion which rests upon his conception of what is artistic is absolutely precluded, also he is decidedly limited in the arrangement of teeth. He is not free to shape the arch according to principles in art or to his own personal taste, because the shape and size of the teeth have already determined this, which completely eliminates individual judgment.

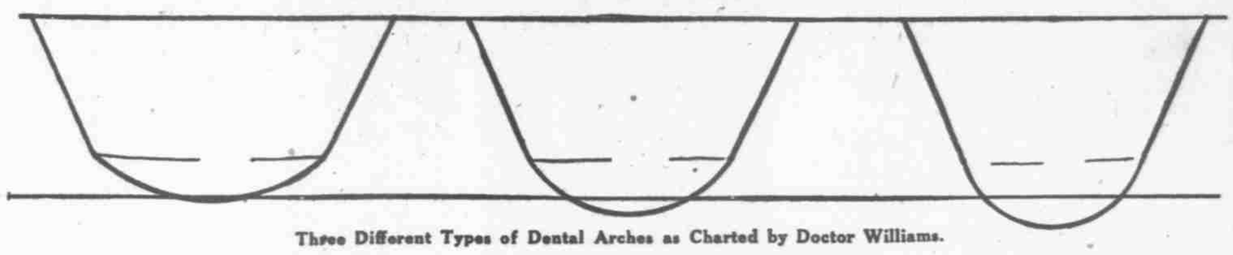
"The relation of the teeth to the jaw is much the same as that of the fingers to the hand; that is, with long, tapering fingers we would have a long slender hand, and with broad, short fingers we would have a broad, short hand. Applying this principle to the teeth we would expect with short, broad teeth to have a broad jaw and if the teeth harmonize with other physical characteristics, the individual would have a full, round face. On the other hand, long, narrow teeth would make a narrow jaw, which would be found in a person with a long, narrow face."

Dr. Williams says that the distance through the teeth fixes the ideal distance across the jaw between the first permanent molars. The proportion of one measurement to the other should be fourteen to nine. This gives the principal factor which the orthodontist should use in correcting a defective jaw.

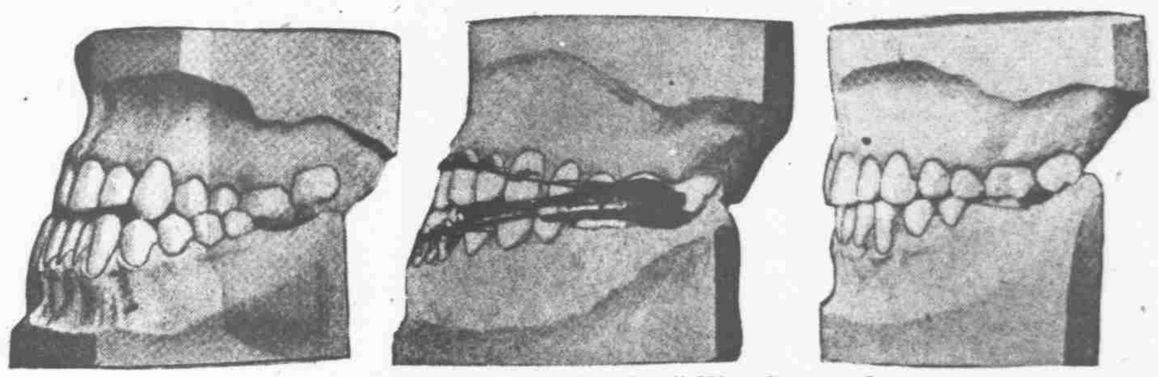
In measuring the width of the teeth, the orthodontist must construct an average from a complete set of teeth for each individual patient. If any teeth are missing he must calculate the size of the missing teeth from those that remain and take that into account in his final calculation.

The essential point however, is that a broad tooth must have a broad arch and a narrow tooth a narrow arch.

When the width of the arch between the two first molars has been determined it is according to this expert, easy to fix the remaining natural lines of the arch.



Three Different Types of Dental Arches as Charted by Doctor Williams.



How a Case of "Undershot Jaw" Was Corrected.

Plaster Cast of the Teeth Before Any Attempt at Correction Was Made. From "Practical Orthodontia," by Doctor Dewey.

The Various Orthodontia Appliances for Moving the Teeth Are Here Shown in Position.

The Teeth After They Had Been Moved and the "Undershot" Appearance Had Been Corrected.

For instance, if the individual has a comparatively wide arch, the curved line of his front teeth will be a comparatively flat one. If the natural line across the molars is a narrow one the line of the front teeth will have a sharper curve.

In many cases, according to Dr. Williams, children whose jaws needed correction had their faces made larger by orthodontists who were working on some fixed formula of their own not suited to the patient's natural structure. The result, of ccurse, was to make them hideous. This will be avoided if the orthodontist bases his work on the natural distance across the mouth, as fixed by the tooth type.

A very frequent condition in the child with defective arches is that the upper first molars are not equally distant from the middle line. This means that one molar has migrated towards the middle line probably on account of the premature loss of some tooth on the affected side. The affected jaw or arch is thus reduced in size and usually one-sided also.

Frequently there is a premature loss of a first eye tooth and a drifting forward of the teeth on this side, so that when the permanent eye tooth erupts, there is a collapsed condition in the arch with no room for the tooth. The orthodontist must find out what teeth have drifted and place them where they really belong.

Very few people realize the importance of keeping the first teeth as long as possible. The common belief is that since nature intends to replace these temporary teeth with a new and permanent set, it does not matter much how soon the first teeth are lost.

Just as much attention ought to be given to watching and filling the cavities in first teeth as is given to the permanent teeth. From the earliest moment a child's first teeth should be brushed just as thoroughly and carefully as the second teeth.

A common cause of misshaped jaw is the too early loss of the first teeth. When one or more of these are lost prematurely the permanent teeth drift forward with alarming rapidity from their proper position and from this condition alone a child may grow up with an overhanging upper jaw and protruding teeth, or with under-shot lower jaw and teeth or with a one-sided face.

The pressure of the lips against the upper teeth naturally tends to hold in the upper dental arch while the pressure of the tongue from within upon the lower dental arch presses it forward, hence when protruding lower teeth are once started in childhood they tend to become more exaggerated as adult age approaches and thus destroy beauty.

Mouth breathing usually has the effect of pushing forward the upper teeth, causing the squirrel-like expression which mars so many otherwise attractive faces. This is explained by the fact that when the mouth is always open the forward thrust of the tongue is constantly felt, while the restraining influence of closed lips is not.

If greater care were given the temporary teeth there would be fewer cases of malformed dental arches. Treatment of the temporary teeth is very much neglected and unwise extraction is too often practised.

For expanding the dental arch an appliance called the expansion arch is used. It consists of an elastic middle section with end pins which fit into the sheaths of the anchor bands on the teeth used as anchorages. The middle section is carefully bent so as to lie against the inner side of the teeth. Force is exerted by the elasticity of the middle section and the pins. The middle section is removed occasionally and rearranged to press against the teeth again. This is repeated at intervals until the teeth are carried into their normal positions.

Retention, or bringing teeth back into line, can be accomplished by similar apparatus.